separated costs; and (2) the cost of providing transport services in less densely populated areas is higher than that reflected by transport rates derived from those special access rates. The existing record is inadequate to permit us to identify more costs that could clearly be reallocated to interstate services. Furthermore, the record indicates that some residual TIC costs may be appropriately allocated to intrastate services. Because we will soon be considering a Notice of Proposed Rulemaking to refer to a Joint Board questions regarding separations, we will leave the determination of the ultimate allocation of the remaining costs recovered by the TIC until the conclusion of that proceeding.

226. Incumbent LEC parties generally contend that special access rates provided an acceptable initializing pricing level for transport transmission services in geographic areas where significant amounts of special access services are provided, but do not reflect the cost of providing transport service in low-density areas in which special access services are not as widespread.[291] We recognize that rates for direct-trunked transport and for the transmission component of tandem-switched transport, because they were established based on special access rates, do not reflect the full cost of providing transport services in higher-cost, rural areas. Because none of our other facilities-based rate elements recover costs reflecting this differential, we conclude that the additional costs of rural transport currently are recovered through the TIC. On the basis of the current record, however, we are unable to quantify these cost differentials. Moreover, based on differences in network architectures, population density variations, topography, and other factors that vary among LECs, we find that transport cost differentials are also likely to vary greatly among incumbent LECs and among study areas served by the same incumbent LEC. We do not believe, however, that we need to quantify these differences in this Order to ameliorate this distortion caused by the current rate structure, because the requirements set forth in the next paragraph will address this issue.

227. If an incumbent LEC deaverages its transport rates, either by implementing zone-density pricing under our rules[292] or by waiver, the underlying predicate is that the costs in low-density areas are higher than those in higher-density areas. The rates it sets for the different areas should reveal a cost differential of at least that magnitude between low-density and high-density areas served by that LEC. When an incumbent LEC deaverages transport rates, therefore, we require it to reallocate additional TIC amounts to facilities-based transport rates, reflecting the higher costs of serving lower-density areas. The reallocation we require here will permit incumbent LECs, in deaveraging their transport rates, to achieve cost-based transport rates while ensuring that a significant portion of costs reflecting the geographic cost difference are removed from the TIC. Each incumbent LEC must reallocate costs from the TIC each time it increases the deaveraging differential. We find that any incumbent LEC that

[291] *See, e.g.*, USTA Comments at 65; GTE Comments at 38; Aliant Comments at 3. *See also* Cable & Wireless Comments at 21-22.

[292] 47 C.F.R. § 69.123.

has already deaveraged its rates must move an equivalent amount from the TIC to its transport services. Under any of these scenarios, the costs shall be reassigned to direct-trunked transport and tandem-switched transport categories or subcategories in a manner that reflects the way deaveraging is being implemented by the incumbent LEC. We do not require incumbent LECs that average their transport rates to make a similar reallocation at this time, because of the difficulty in determining the amount to be reallocated.

228. *Price Cap Implementation issues.* For purposes of phasing out the TIC, we are keeping the TIC in its own service category in the trunking basket. The reallocation of costs from the TIC to other access elements will require price cap LECs to adjust their price cap indices (PCIs) and service band indices (SBIs) to reflect the new revenue streams. To accomplish these reallocations, price cap LECs shall make exogenous adjustments to their PCIs and SBIs that are targeted to the indices in question, rather than applying the exogenous adjustment proportionately across all categories in the affected price cap basket. Thus, when a reallocation occurs within a price cap basket, only the affected SBIs will be adjusted. When the reallocation affects service categories in more than one basket, however, the affected PCIs and SBIs must be adjusted. The upward or downward adjustment to the PCIs and upper SBIs shall be calculated as the percentage of the revenues being added or subtracted from a basket or category, divided by the total revenues recovered through the basket or category at the time of the adjustment. For example, if ten percent of the revenues are being reallocated from a service category, the category upper SBI will be reduced by ten percent. If that revenue amount is only three percent of the PCI for the basket, the PCI is reduced by three percent.

b. Treatment of Remaining Costs Recovered by the TIC

229. *Residual TIC reduction plan.* After the costs identified above have been reallocated to other access services, some costs will continue to be recovered by the TIC. While it is desirable to eliminate the TIC as soon as possible by shifting the costs recovered by the TIC to facilities-based rates, referring separations questions to a Joint Board is the best means of reaching that ultimate objective, as we noted earlier. Even as we make this referral, we will require incumbent LECs to target to the TIC price cap reductions arising in any price cap basket as a result of the application of the "GDP-PI minus X-factor" formula until the per-minute TIC is eliminated, as many parties have suggested.[293] These parties submit that this targeting will permit incumbent LECs to manage the reduction in revenues recovered by the TIC, while reducing the amount at issue in the TIC. Sprint states that, using a targeting approach, we would not need to address the cost allocation issues raised by Part 36 and Part 69.[294] Targeting these price cap reductions to the TIC reduces the TIC over a reasonable

[293] *See, e.g.*, PacTel Comments at 72; Sprint Comments at 29,52; Ameritech Reply at 32-33; BA/NYNEX Comments at 38.

[294] Sprint Reply at 17-18.

period, thereby ultimately substantially reducing what is widely recognized to be an inefficient aspect of the access rate structure. We require price-cap LECs to begin these targeted X-factor reductions to the TIC in tariff filings to become effective July 1, 1997.

230. Targeting PCI reductions to the per-minute TIC will not change the overall revenue levels that our price cap mechanisms permit incumbent LECs to receive. We have reallocated those costs that the record shows are clearly related to other facilities-based elements. The upcoming separations proceeding may provide additional data that will permit us to reallocate more costs to facilities-based rate elements, or to the intrastate jurisdiction. The approach we take is a reasonable response to the D.C. Circuit's remand directive, and establishes a plan that should substantially reduce the TIC within a reasonable period, pending review of the jurisdictional separations process.

231. We reject ALTS' allegation that targeting the productivity factor to the TIC undercuts the rationale for the "just and reasonable" status of all price-cap rates, which ALTS contends is dependant on the widespread application of the X-factor. The targeting approach that we adopt will eliminate anticompetitive aspects of the TIC, which promotes inefficient entry into the transport market by imposing some transport costs on IXCs that do not cause the costs to be incurred. In addition, by spreading current TIC revenues across all price cap PCIs and SBIs, our targeting method does not offer TIC revenues special insulation against the pressures of the competitive marketplace, as would some proposals to bulk-bill the TIC to IXCs. We also decline to adopt the approach of spreading the remaining costs recovered by the TIC proportionately among all transport services, as proposed by State Consumer Advocates.[295] That approach might, because of the unknown nature of the costs that will remain in the TIC, result in an excessive reallocation to transport.

232. The D.C. Circuit instructed us to revise our transport rate structure rules to be more consistent with cost-causation principles. There is conflicting evidence in the record concerning the nature of the costs contained within the residual TIC; these costs may be traffic sensitive or NTS and may be associated with common line, transport or switching services. BA/NYNEX states, without explanation, that the costs in the TIC are NTS in nature.[296] To the extent that some portion of the residual TIC has its origin in the methods used to separate cable and wire facilities between the regulatory jurisdictions, it seems likely

[295] State Consumer Advocates Comments at 34-37.

[296] BA/NYNEX Reply at 39-40. USTA and many incumbent LECs proposed recovering the remaining TIC costs through a bulk billing mechanism based on an IXC's share of presubscribed lines or revenues. *See, e.g.*, USTA Comments at 66; BA/NYNEX Comments at 38; PacTel Comments at 72; SNET Reply at 27-28. This proposal to use presubscribed lines is consistent with treating the remaining costs recovered by the TIC as NTS costs.

that BA/NYNEX is partially correct in this assertion. The evidence, however, does not clearly resolve this issue.

233. If the costs remaining in the residual TIC are NTS, as BA/NYNEX suggests, then traffic-sensitive recovery could artificially raise per-minute rates for interstate access. These higher per-minute access rates could distort the market for interstate toll services by artificially suppressing demand for interstate toll services and by encouraging users that efficiently could make use of the network to instead seek other alternatives. Conversely, if costs remaining in the residual TIC are usage-sensitive, flat-rating may also create a distortion by encouraging inefficient overuse of interstate toll services. Because the limited evidence in the record suggests that at least some amount of the residual TIC represents NTS costs, and because we wish to see that consumers enjoy the benefits of usage of the network to the greatest extent possible, we find that we should err, if at all, on the side of NTS recovery of these costs. For elements not demonstrably reflecting usage-sensitive costs, therefore, we find, on balance, compelling policy arguments in favor of flat-rated pricing because usage-sensitive recovery of any NTS costs artificially suppresses demand for interexchange calling by inflating per-minute rates. In the absence of definitive evidence as to the nature of the residual TIC amounts, we conclude that the public interest would be better served by imposing these costs on IXCs on a flat per-line basis, rather than on a per-minute basis.

234. Accordingly, we seek to migrate the current usage-based charges into flat-rated charges as quickly as possible consistent with avoiding short-term market distortions. We do that by: (1) on July 1, 1997, drawing down the per-minute-of-use residual TIC charge by targeting the price cap productivity (X-factor) adjustment to the trunking PCI and, specifically, the TIC SBI, thus effectively spreading those residual TIC revenues, which otherwise would be recovered exclusively on a minute of use basis, among the universe of (both traffic-sensitive and NTS) access services and moving TIC recovery closer to flat-rated recovery; (2) starting in January 1998, recovering remaining residual TIC revenues through PICC charges each year, subject to the PICC cap; and (3) drawing down any remaining residual per-minute TIC revenues each July by targeting the annual X-Factor adjustments to those revenues.

235. The targeting of price cap productivity reductions to the TIC will be accomplished in the following manner. Because the price cap LECs will not have reallocated facilities-based costs contained in the TIC before they file tariffs to be effective July 1, 1997, we first direct the price cap LECs to compute their anticipated "residual" TIC amount by excluding revenues that are expected to be reassigned on a cost-causative basis to facilities-based charges in the future, pursuant to the transition plan described in this Order. To determine TIC amounts so excluded, NYNEX, BellSouth, U S West, and Bell Atlantic shall use the residual TIC percentage estimates contained in USTA's *ex parte* letter filed May 2,

1997, to compute their respective anticipated residual TICs.[297] SBC Communications shall use the cost data for SWBT, Pacific Bell, and Nevada Bell contained in its *ex parte* letter filed April 24, 1997 to estimate its residual TICs.[298] Each remaining price cap LEC shall estimate a "residual" TIC in an amount equal to 55 percent of its current TIC revenues. For these remaining price cap LECs, we find that this 55 percent level represents a reasonable, but conservative estimate. The 55 percent level corresponds approximately to the lowest residual TIC percentage identified in the record, and three of the price cap LECs that submitted data on the record are within a few percentage points of this level. We therefore find that residual TIC estimates at the 55 percent level for companies that have not developed actual percentage estimates on the record will be reasonable, but will also minimize the risk that we will eliminate facilities-based TIC costs with targeted X-factor price cap reductions.

236. The "GDP-PI minus X" adjustments LECs ordinarily would apply to each of their price cap indices (i.e. revenues) for the July 1, 1997, annual filing shall be applied by LECs to reduce their calculated anticipated "residual" TIC revenues. For tariffs to become effective July 1, 1997, the price cap LECs shall calculate the annual price cap reduction resulting from the application of the productivity adjustment to each basket other than the interexchange basket, and shall sum the dollar effects of the adjustment. If the effect is to reduce PCIs, the dollar amount shall be targeted completely to the trunking basket PCI and the TIC SBI, without changing the PCIs or SBIs for any other basket or service category. The percentage reduction in the PCI and SBI shall equal the ratio of the total dollar effect of the price cap annual adjustment to the dollar value of the PCI and SBI, respectively. If the effect of the productivity adjustment would increase the PCIs, the PCIs shall be adjusted in their usual fashion, and no targeting to the TIC shall occur. This avoids exacerbating an already inefficient aspect of the access rate structure.

237. Price cap LECs will begin reallocation of facilities-based TIC components on January 1, 1998. At that time, the price cap LECs should all have actual cost data reflecting the facilities-based components of the TIC. If, at that time, any price cap incumbent LEC determines that its use of the applicable residual TIC estimate, above, resulted in more PCI reductions being targeted to the interconnection charge in its tariff filing to become effective on July 1, 1997, than were required to eliminate the per-minute interconnection charge, then that price cap LEC shall make necessary exogenous adjustments to its PCIs and SBIs to reverse the effects of the excess targeting.

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[297] These percentages are as follows: NYNEX, 77.63 percent; BellSouth, 56.93 percent; U S West, 59.14 percent; and Bell Atlantic, 63.96 percent. *See* Letter from Linda Kent, Associate General Counsel, USTA, to William F. Caton, Acting Secretary, filed May 2, 1997.

[298] These percentages, calculated from TIC data supplied, are: SWBT, 69.11 percent; Pacific Bell and Nevada Bell combined, 53.52 percent. *See* Letter from Todd F. Silbergeld, Director -- Federal Regulatory, SBC Communications, Inc., to William F. Caton, Acting Secretary, April 24, 1997.

238. For tariff filings to become effective July 1, 1998, and annually in July thereafter, all price cap LECs will have actual cost data reflecting the facilities-based components of the TIC and will be able to target reductions to actual anticipated residual per-minute TIC amounts without resort to the percentage estimates prescribed above. For these filings, "GDP-PI minus X" adjustments similar to those described above shall be targeted to the trunking basket PCI and the TIC SBI to reduce residual per-minute TIC amounts recovered through per-minute originating and terminating access charges.

239. To avoid the adverse effects of per-minute pricing of costs that may be NTS, we require price cap LECs to recover residual TIC amounts not otherwise eliminated by targeted X-factor reductions, described above, through the flat-rated PICC to the extent the PICC is below its ceiling. In order to ensure that primary residential and single line business subscribers do not pay more than their fair share of the residual TIC, however, we prohibit price cap LECs from charging a PICC on primary residential or single-line business lines that recovers TIC revenues that exceed residual TIC revenues permitted under our price cap rules divided by the total number of access lines. As the PICC caps increase each year, more of the residual TIC charge can be included in the flat-rated PICC. Any residual TIC amounts that cannot be recovered through the PICC shall be recovered on a per-minute basis from originating traffic, subject to a cap on per-minute originating access charges, as explained in Section III.A, above.[299] If this cap is exceeded, the residual TIC shall be recovered through per-minute terminating switched access rates. Although a portion of the residual TIC will be recovered through PICC charges, the TIC will remain in the trunking basket. Therefore, to ensure that excess headroom is not created in the trunking basket, price cap LECs shall include the TIC revenues received from the flat-rated PICC in calculating the API for the trunking basket and the SBI for the TIC.

240. The policies adopted when the TIC was created require incumbent LECs to assess the TIC on all minutes that interconnect with the incumbent LEC switched access network, including minutes that transit a CAP's transport network without using any incumbent LEC transport facilities. As we noted in the NPRM,[300] and as some commenters assert,[301] if the incumbent LEC's transport rates are kept artificially low and the difference is recovered through the TIC, competitors of the incumbent LEC pay some of the incumbent LEC's transport costs. In a recent arbitration between Teleport and US West, the Colorado Commission has precluded US West from imposing the TIC on competitors for the portion of

[299] *See* para. 100, above.

[300] NPRM at ¶ 97.

[301] *See, e.g.*, Teleport Comments at 30-32; Time Warner Comments at 12-13, 15.

transport that U S West does not provide.[302] We find that our current policy, which requires competitive entrants to pay the TIC even in cases where it provides its own transport, is inconsistent with the procompetitive goals of the 1996 Act. We therefore modify our rules to permit incumbent LECs to assess any per-minute residual TIC charge only on minutes that utilize incumbent LEC transport facilities, and not on any switched minutes of CAPs that interconnect with the incumbent LEC switched access network at the end office.

241. *Other Approaches.* We reject alternative methods for recovering the TIC that were proposed in the record. The majority of the incumbent LEC parties supported recovering any remaining costs in the TIC by bulk billing such amounts to IXCs based on each IXC's share of revenues, or presubscribed lines.[303] Other incumbent LECs proposed establishing "public policy" elements to recover the residual TIC.[304] These approaches would insulate TIC costs from the pressures of the competitive market and guarantee incumbent LECs the recovery of these amounts, even where such costs have resulted from inefficiencies that the competitive market -- but not regulators -- detected and otherwise would eliminate. This would be inconsistent with the development of an efficient competitive market. Our resolution of the TIC will allow LECs a reasonable opportunity to recover their costs, without providing a guarantee. We also reject the idea of spreading the remaining costs recovered by the TIC proportionately over all transport services, as suggested by AARP, *et al.* As we noted earlier, some of the remaining costs in the TIC may implicate certain Commission decisions separating costs between the federal and state jurisdictions and thus may be related to services other than transport. We, therefore, believe that awaiting further consideration by a Joint Board is a more practical means of ultimately resolving the TIC issue.

242. Some parties have requested that a portion of the costs recovered by the TIC should be considered to be universal service costs.[305] We do not find this argument persuasive. Elsewhere in this Order, we have reallocated the TIC's identifiable cost components. On the basis of the record before us, we cannot clearly associate the remaining TIC revenues with any particular facilities or services. The parties arguing that these costs

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[302] *See TCG Colorado Petition for Arbitration Pursuant to § 252(b) of the Telecommunications Act of 1996 to Establish an Interconnection Agreement with U S West*, Docket No. 96A-329T, Decision Regarding Petition for Arbitration, Decision No. C96-1186 (adopted Nov. 5, 1996); *TCG Colorado Petition for Arbitration Pursuant to § 252(b) of the Telecommunications Act of 1996 to Establish an Interconnection Agreement with U S West*, Docket No. 96A-329T, Order Denying Applications for Rehearing, Reargument, or Reconsideration, Decision No. C96-1344 (adopted Dec. 18, 1996), at ¶ I.B.1.4; Letter from Judith Herrman, Manager, Federal Regulatory Affairs, Teleport Communications Group, to Richard Lerner, Competitive Pricing Division, FCC, April 11, 1997.

[303] *See, e.g.*, USTA Comments at 66; BellSouth Comments at 13-14; PacTel Comments at 72.

[304] *See, e.g.*, U S West Comments at 71-73; SWBT Reply at 11; GTE Comments at 39, 41-44.

[305] *See, e.g.*, WITA Comments at 8; Texas Public Utility Counsel Comments at 21.

are related to universal service have not made any clear showing as to the source of these costs or demonstrated why they believe that these TIC revenues are either costs of universal service that should be recovered from the universal service fund or constituent costs of supported services.

243. We have analyzed the effect of the reallocation of TIC costs and the new recovery procedures on small business entities, including small LECs and new entrants, and find that the changes will facilitate the development of a competitive marketplace by moving incumbent LEC rates toward cost-based levels and by eliminating the ability of incumbent LECs to assess the TIC on switched access minutes that do not use incumbent LEC transport facilities. These pricing revisions may create new opportunities for small entities wishing to enter the telecommunications market.

E. SS7 Signalling

1. Background

244. SS7 is a network protocol used to transmit signalling information over common channel signalling networks. As described in greater detail in the NPRM, signalling networks like SS7 establish and close transmission paths over which telephone calls are carried.[306] Signalling networks are also used to retrieve information from remote data bases to enable credit card and collect calling. SS7 systems are also used to transmit information needed to provide custom local area signalling services like automatic call back.[307]

245. An SS7 network consists of several primary components -- signalling points, signal transport links, and dedicated lines used for access to an incumbent LEC's signalling network (signal links). Signalling points are nodes in an SS7 network that originate, transmit, or route signalling messages. There are three principal types of signalling points: service switching points (SSPs), service control points (SCPs), and signalling transfer points (STPs). An SSP is a switch that can originate, transmit, and receive messages for call setup and database transactions. An SCP serves as a database that stores and provides information used in the routing of calls, such as the line information database (LIDB) used to validate calling cards or the database that identifies the designated long-distance carrier for toll-free service. An STP is a specialized packet switch that performs screening and security functions and switches SS7 messages within the signalling network.

246. Signal transport links are facilities dedicated to the transport of SS7 messages within the incumbent LEC's signalling network. Finally, dedicated network access lines

[306] NPRM at ¶¶ 123-25.

[307] *See Ameritech SS7 Waiver Order*, 11 FCC Rcd at 3841 (1996).

(DNALs) consist of dedicated circuits that transmit queries between the incumbent LEC's signalling network and the signalling networks of other individual carriers, such as IXCs. A carrier's DNAL is connected to an incumbent LEC's signalling network through a port on an incumbent LEC's STP.

247. Under the interim transport rate structure, incumbent LECs charge IXCs and other access customers a flat-rated charge (dedicated signalling transport) under Part 69 for the use of dedicated facilities used to connect to the incumbent LEC's signalling network. This rate element has two subelements -- a flat-rated signalling link charge for the dedicated network access line (dedicated signalling line) and a flat-rated STP port termination charge.[308] Most other signalling costs, such as costs for switching messages at the STP and transmitting messages within the signalling network, are not recovered through facility-based charges and thus most, if not all, of these costs are embedded in the TIC or in the local switching charge and recovered through per-minute-of-use charges. Retrieval of information from databases for toll-free calls and LIDB databases, however, is charged on a per-query basis.[309]

248. In the NPRM, we solicited comment on whether the Commission should revise its rate structure for SS7 services to reflect the SS7 rate structure implemented by Ameritech.[310] In March, 1996, the Commission granted a waiver to Ameritech, allowing it to restructure its recovery of SS7 costs through four unbundled charges.[311] These charges correspond to various functions performed by signalling networks: signal link, STP port termination, signal transport, and signal switching.

249. The Ameritech waiver was granted to allow Ameritech to realign its charges for SS7 services more closely with the manner in which such costs are incurred. Unbundling of SS7 services from transport and local switching ensures that transport and local switching customers do not pay for SS7 services they do not use. Unbundling also enables Ameritech to offer SS7 services to competing providers of local exchange and exchange access services without requiring the purchase of other elements that the competitors do not need.[312] In support of its waiver petition, Ameritech noted that it had received numerous customer requests for such unbundling. It also explained that it had deployed equipment necessary for

[308] 47 C.F.R. § 69.125.

[309] 47 C.F.R. § 69.120.

[310] NPRM at ¶ 127.

[311] *Ameritech SS7 Waiver Order*, 11 FCC Rcd 3839 (1996).

[312] 11 FCC Rcd at 3853.

measuring third-party usage of its SS7 networks, enabling the company to bill its SS7 services separately from its switched access services.[313]

250. The NPRM also requested comment on whether incumbent LECs should be allowed to impose separate charges for ISDN User Part (ISUP) messages and Transaction Capabilities Application Part (TCAP) messages.[314] ISUP messages are used to set up and take down calls. For example, ISUP messages include the initial address message used to establish and close the transmission path used to carry a telephone call.[315] TCAP messages, on the other hand, are used to carry information between SSPs that support particular services, such as toll free services, LIDB services and certain custom local area signalling services (CLASS) like automatic call back.[316] We noted that differentiation between charges for ISUP and TCAP messages may be economically justified because TCAP messages tend to be shorter in average length and place lower demands on the signalling network that ISUP messages.[317]

251. The NPRM also requested comment regarding the appropriate placement of SS7 signalling elements in price cap baskets. Currently, STP port termination rates and charges for the signalling link, or DNAL, are placed in the trunking basket.[318] Because both services are dedicated to particular SS7 customers, rates for these elements are flat-rated. We requested comment on whether the STP port termination charge should be placed in its own service category in the traffic-sensitive basket. We noted that interconnectors can provide their own signalling link, exposing that service element to some measure of competition. The STP port termination, on the other hand, is relatively insulated from competitive pressures because it is part of the incumbent LEC's STP and must be purchased from the incumbent LEC under existing network architecture.

2. Discussion

252. As we noted in the *Ameritech SS7 Waiver Order*, the removal of SS7 costs from the local switching and transport interconnection charge rate elements would benefit access customers that pay for these services but do not actually use an incumbent LEC's signalling services. It would also benefit alternative local service providers by enabling them to

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[313] 11 FCC Rcd at 3848.

[314] NPRM at ¶ 135.

[315] 11 FCC Rcd at 3841-42.

[316] *Id.*

[317] NPRM at ¶ 135.

[318] 47 C.F.R. § 61.42(d)(3); NPRM at ¶¶ 128, 130.

purchase separate SS7 services from incumbent LECs to support their provision of competing local exchange or exchange access services.[319] Unbundling the individual SS7 components into separate charges would further promote efficiency by ensuring that signalling charges more accurately reflect the costs of providing such services. Competitive service providers could limit their signalling costs by purchasing only the signalling elements they need.[320] Despite these benefits, however, we are reluctant to impose on incumbent LECs the cost burden of installing metering or other equipment needed to measure third party usage of signalling facilities.[321] In granting Ameritech a waiver to implement its unbundled SS7 rate structure, we noted that Ameritech had previously installed the equipment and other facilities needed to meter independent signalling usage.[322] Although we encourage actions that would promote disaggregation and unbundling of SS7 services, we will not require incumbent LECs to implement such an approach and incur the associated equipment costs of doing so. The record indicates that, as a general matter, the costs of mandating the installation of metering equipment may well exceed the benefits of doing so.[323]

253. Instead, we will permit incumbent LECs to adopt unbundled signalling rate structures at their discretion and acquire the appropriate measuring equipment as needed to implement such a plan. Specifically, incumbent LECs may implement the same unbundled rate structure for SS7 services that we approved in the *Ameritech SS7 Waiver Order*.[324] We recognize, however, that other signalling rate structures may achieve the same benefits that are available under the Ameritech rate structure. Hence, an incumbent LEC may implement an unbundled signalling rate structure that varies from the approach implemented in the *Ameritech SS7 Waiver Order* by filing a petition demonstrating that the establishment of new rate elements implementing such a service is consistent with the public interest.[325] We note, however, that variations in signalling rate structures among incumbent LECs could impose burdens on IXCs if IXCs must adapt to a diverse range of unbundled signalling rate

[319] 11 FCC Rcd at 3853.

[320] *Id.*

[321] Bell Atlantic and NYNEX estimate the cost of installing facilities to measure SS7 usage ranges between $15 million and $40 million. BA/NYNEX Comments at 40. Sprint estimates that the cost would run between $15 million and $20 million. Sprint Comments at 31.

[322] 11 FCC Rcd at 3844-45.

[323] USTA Comments at 37; BA/NYNEX Comments at 40; PacTel Comments at 73; GTE Comments at 53.

[324] A carrier could adopt the Ameritech rate structure pursuant to 47 C.F.R. 69.4(g), which permits a carrier to implement rate structures previously approved by the Commission for other carriers.

[325] 47 C.F.R. § 69.4(g).

structures.[326] We anticipate that, if incumbent LECs choose to adopt unbundled rate structures for their SS7 network services, they will evaluate how the implementation of these plans will affect their prospective customers.[327]

254. With respect to rate differentiation between ISUP and TCAP messages, the NPRM expressed the concern that imposing rate differentiation may be inconsistent with rate structure simplicity.[328] Several commenters indicate that the costs of implementing rate differentiation would exceed the benefits of such an approach.[329] We further note that commenters offered little, if any, general support for the adoption of rate differentiation. Accordingly, to avoid unnecessary complexity and to avoid the imposition of unnecessary regulatory costs, we will not impose a rate differential between ISUP and TCAP messages.

255. With respect to the placement of SS7 rate elements in price cap baskets, we have previously recognized that the signalling link and the STP port termination are not subject to the same level of competition. As noted in the *Ameritech SS7 Waiver Order*, STP port termination is provided only by incumbents while the signalling link can be provided by SS7 customers themselves or by other alternative providers.[330] Comments filed in this proceeding also acknowledge this competitive disparity.[331] Although Ameritech discounts the risk that STP port termination charges would be used to offset price reductions for the signal link, it nevertheless acknowledges the existence of the competitive differential we suggested in the NPRM. Other commenters argue that the competitive disparity is sufficient to justify concerns that price cap LECs would adjust their rates to account for the competitive differential. Accordingly, we will establish a new STP port termination rate element in the traffic-sensitive basket. Placing these SS7 services in different price cap baskets will ensure consistency with the Commission's general approach of maintaining elements with similar competitive characteristics in the same service baskets.

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[326] *See* Sprint Comments at 31.

[327] Sprint suggests that an industry forum may be appropriate to develop an optimum rate structure for unbundled signalling services. Sprint Comments at 31.

[328] NPRM at ¶ 135.

[329] MCI Comments at 89; Time Warner Comments at 17; CompTel Comments at 31-32.

[330] 11 FCC Rcd at 3859. NPRM at ¶ 130.

[331] MCI Comments at 87-88; AT&T Reply at 33-34.

F. Impact of New Technologies

256. The NPRM requested comment regarding the rate structure treatment of new technologies that enable new telecommunications services and, by enhancing the productivity of telecommunications facilities, lower prices for services in the future. These technologies, which we describe in greater detail in the NPRM, include synchronous optical networks (SONET), Asynchronous Transfer Mode (ATM) switching, and advanced intelligent networks (AIN). We invited commenters to recommend specific rate structure rules that would reflect the manner in which incumbent LECs incur costs when providing services utilizing such new technologies.[332]

257. As a general matter, the Commission is reluctant to adopt detailed rules governing rate structures for recovering the cost of deploying advanced technologies. We note that, in the *Price Cap Third Report and Order*, we adopted rules that permit price cap LECs to petition the Commission for the establishment of one or more switched access rate elements to accommodate new services.[333] Under these rules, petitioners must demonstrate either of the following: 1) that the new rate elements would be in the public interest; or 2) that another LEC has previously obtained approval to establish identical rate elements and that the original petition did not rely upon a competitive showing as part of its public interest justification.[334] Because technological advancements emerge rapidly, the adoption of uniform rate structures corresponding to particular technologies may slow investment in the development of newer technologies or improvements in current technologies. Indeed, as a general matter, incumbent LECs oppose the adoption of uniform rate structures for new technologies, suggesting that strict uniform rules in this regard could inhibit development of such technologies. Accordingly, we will refrain from adopting in this Order specific rate structures with respect to SONET, AIN, or other new technologies. As noted above, however, our rules already accommodate rate element adjustments that may be needed on an ad hoc basis when technological advancements justify such modifications. As particular new technologies become used on a widespread basis, we can always consider whether there is a need for a uniform rate structure at that point.

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[332] NPRM at ¶ 139.

[333] *Price Cap Third Report and Order* at ¶ 309-10.

[334] 47 C.F.R. § 69.4(g).

IV. BASELINE RATE LEVELS

A. Primary Reliance on a Market-Based Approach With A Prescriptive Backdrop and the Adoption of Several Initial Prescriptive Measures

1. Background

258. In the NPRM, we established a goal of encouraging efficient competitors to enter local exchange access markets so that incumbent LECs would face substantial competition for the entire array of interstate access services.[335] As a particular service becomes subject to substantial competition from new providers, we proposed to remove that service from price cap and tariff regulation.[336] We sought comment on two general approaches for a transition to reliance on substantial competition to ensure that interstate access charges are closely related to forward-looking economic costs: a "market-based" approach and a "prescriptive" approach. Under a market-based approach, we would permit market forces to operate as competition emerges, allowing an incumbent to change its prices in response to competitive entry. To that end, we proposed a two-phase approach in which incumbent LECs would be permitted certain pricing flexibility upon a showing that meaningful competitive entry is possible within a particular local exchange and exchange access market, followed by a further relaxation of price cap regulation when meaningful actual competition developed within the market.[337] We did not propose, however, to abandon the possibility of using the prescriptive tools at our disposal in the event that competition does not develop in some places.

259. As an alternative to the proposed market-based approach, we also sought comment on a prescriptive approach, under which incumbent LECs would be required to change their prices for some or all exchange access services using specific measures adopted by the Commission to more accurately ensure that access charges are closely related to the economic costs of providing interstate access services.[338] We also invited comment whether the two approaches could be merged in some fashion.[339] We emphasized that our ultimate goal under any approach, whether market-based, prescriptive or combined, is to remove from price cap regulation LEC services that are subject to substantial competition. Instead of price

[335] NPRM at ¶ 140.

[336] NPRM at ¶ 149.

[337] NPRM at ¶ 140.

[338] NPRM at ¶ 141.

[339] NPRM at ¶ 144.

cap regulation, we expect eventually to rely on the operation of competitive local markets to prevent incumbent LECs from exercising market power, and thereby to protect consumers.

260. In this section, we endorse the use of a market-based approach generally. Our market-based approach will retain the protection afforded by price cap regulation, while relaxing particular restrictions on incumbent LEC pricing as competition emerges, thereby permitting the development and operation of competitive markets, which will maximize the efficient allocation of telecommunications services and promote consumer welfare. This section also explains how, if competition fails to emerge over time for certain access services in particular geographic areas, we will ensure that the rates for those services reflect the forward-looking economic costs of providing the services. In the NPRM, we sought comment on a number of specific issues concerning the timing and degrees of pricing flexibility and ultimate deregulation. We recognize that we must attend carefully to this task of granting incumbent LECs increased pricing flexibility commensurate with competitive developments, and we will resolve these issues of timing and degree in detail in a subsequent report and order in this docket, where we can more fully discuss these matters.

261. Elsewhere in this Order, we adopt or propose several measures that work within our current price cap structure to lower baseline access charge rate levels consistent with evidence that the revised rate levels better reflect the underlying costs of providing interstate access services. In Section IV.C below, we order an exogenous cost reduction to reflect the completion of the amortization of equal access costs. In Section IV.D, we order reallocation of certain marketing and retail expenses and discuss the reallocation of GSF costs. We issue a further notice on GSF costs in Section VII. In the companion *Price Cap Fourth Report and Order*, which we also adopt today, we modify our current price cap plan by adopting a single productivity offset (X-Factor) of 6.5 percent and eliminating sharing while maintaining the low-end adjustment.

2. Discussion

262. The Commission's objective is the one set forth in the 1996 Act -- "opening all telecommunications markets to competition."[340] Therefore, we must ensure that our own regulations do not unduly interfere with the development and operation of these markets as competition develops. If we successfully reform our access charge rules to promote the operation of competitive markets, interstate access charges will ultimately reflect the forward-looking economic costs of providing interstate access services. This is so, in part, because Congress established in the 1996 Act a cost-based pricing requirement for incumbent LECs' rates for interconnection and unbundled network elements, which are sold by carriers to other carriers. As we have recognized, interstate access services can be replaced with some

[340] *Joint Explanatory Statement.*

interconnection services or with functionality offered by unbundled elements.[341] Because these policies will greatly facilitate competitive entry into the provision of all telecommunications services, we expect that interstate access services will ultimately be priced at competitive levels even without direct regulation of those service prices.

263. We decide that adopting a primarily market-based approach to reforming access charges will better serve the public interest than attempting immediately to prescribe new rates for all interstate access services based on the long-run incremental cost or forward-looking economic cost of interstate access services. Competitive markets are superior mechanisms for protecting consumers by ensuring that goods and services are provided to consumers in the most efficient manner possible and at prices that reflect the cost of production. Accordingly, where competition develops, it should be relied upon as much as possible to protect consumers and the public interest. In addition, using a market-based approach should minimize the potential that regulation will create and maintain distortions in the investment decisions of competitors as they enter local telecommunications markets. Finally, under the 1996 Act, implicit universal service subsidies, wherever possible, are to be made explicit and supported by all carriers on an equitable and non-discriminatory basis.[342] To the extent that any implicit subsidies remain in interstate access charges because it was not feasible to identify them or make them explicit, our market-based approach will have the effect of making those implicit subsidies subject to being competed away as competitors offer comparable services at prices that do not include the subsidies. In addition, we note that the rate structure changes we adopt today go a long way towards achieving such ends because the inefficiency produced by distortions in markets "rises as a quadratic function of the relative price distortion."[343] Therefore, the first steps made toward removing distortions caused by our regulations will produce the greatest benefits.

264. The market-based approach to access charge reform that we adopt will not, as some parties assert, expose customers of interstate access services to the unfettered exercise of market power.[344] We will continue to maintain the current mechanisms upon which we rely to ensure that rates for these services are "just and reasonable,"[345] and not unjustly or unreasonably discriminatory.[346] Instead of exposing customers to harm, we expect that

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[341] *E.g.*, NPRM ¶¶ 8-9, 170.

[342] 47 U.S.C. § 254.

[343] Scherer & Ross, *supra.*, at 662.

[344] Appendix B, Section IV.A., *infra.*

[345] 47 U.S.C. § 201.

[346] 47 U.S.C. § 202.

permitting incumbent LECs certain kinds of pricing flexibility in response to the development of competition will allow prices for interstate access services to adjust in ways that reflect the underlying economic costs of providing those services without moving outside the range of rates that are just and reasonable. This process of relaxing regulation as competition develops, and ultimately deregulating services subject to effective competition, is well established. For example, many of the types of pricing flexibility discussed in the NPRM are similar to forms of pricing flexibility we have in the past accorded incumbent LECs and IXCs facing increased competition in markets for particular services.[347]

265. Economic teaching also leads to the conclusion that rates for interstate access services will generally move toward the forward-looking economic cost of providing such services in response to increased competition in local exchange and exchange access markets.[348] In addition, competition will do a better job of determining the true economic cost of providing such services. As competitive entry becomes increasingly possible, IXCs that now purchase interstate switched access services from incumbent LECs will be able to bypass those services where the prices (interstate access charges) do not reflect the economic costs of providing the underlying services. Those IXCs can do this by entering the local markets themselves as local exchange service providers, thereby self-providing interstate access services for their new local exchange service customers. They can also seek out competitive providers of comparable services. As customers choose providers other than incumbent LECs as their local providers, interstate access services will come to be priced competitively. Incumbent LECs will have to respond to competitors' offerings with lower-priced access services of their own in order to retain customers that would otherwise switch to competitors' networks, further increasing the effect of competition on overall access charge payments.

266. The 1996 Act has created an unprecedented opportunity for competition to develop in local telephone markets. It also has provided this Commission with tools for opening markets to competition, and for implementing our market-based relaxation of regulation so that interstate access charges reflect forward-looking economic costs. We recognize, however, that competition is unlikely to develop at the same rate in different locations, and that some services will be subject to increasing competition more rapidly than

[347] *See, e.g., Expanded Interconnection with Local Telephone Company Facilities*, CC Docket No. 91-141, Report & Order & Notice of Proposed Rulemaking, 7 FCC Rcd 7369 (1992) (geographic deaveraging); *AT&T Communications (Revisions to Tariff FCC No. 12)*, CC Docket No. 87-568, Memorandum Opinion & Order, 4 FCC Rcd 4932 (1989).

[348] *See, e.g.,* Dennis W. Carlton & Jeffrey M. Perloff, *Modern Industrial Organization* 92-93 (2d ed. 1994)

others.[349] Accordingly, we anticipate that competition will drive rates for some interstate access services toward more economically efficient levels more rapidly in some areas than rates for other services or in other areas. Where competition develops, we will provide incumbent LECs with additional flexibility, culminating in the removal of incumbent LECs' interstate access services from price regulation where they are subject to sufficient competition to ensure that the rates for those services are just and reasonable, and are not unjustly or unreasonably discriminatory.

267. We also recognize, however, that there will be areas and services for which competition may not develop. Therefore, we shall retain many of the existing safeguards afforded by our price cap regulation, including the productivity offset (X-Factor), which requires incumbent LECs to adjust their access charges to reflect changes in the economic cost of providing service. In addition, we also adopt a prescriptive "backstop" to our market-based approach that will serve to ensure that all interstate access customers receive the benefits of more efficient prices, even in those places and for those services where competition does not develop quickly. To implement our backstop to market-based access charge reform, we require each incumbent price cap LEC to file a cost study no later than February 8, 2001, demonstrating the cost of providing those interstate access services that remain subject to price cap regulation because they do not face substantial competition. The Commission will require submission of such studies before that date if competition is not developing sufficiently for our market-based approach to work. Studies should identify and quantify forward-looking costs, short-run and long-run, that are incremental to providing each such service, and also costs that are common as between various services. These studies are required only for non-competitive services; as stated above, we do not intend to regulate prices of services that are subject to substantial competition.

268. We have chosen this date in order to give competition sufficient time to develop substantially in the various markets for interstate exchange access services. We have also chosen this date to permit us and all interested parties to take into account the effects of implementing the substantial changes that we adopt in this Order and that we will be adopting elsewhere to satisfy the universal service goals in section 254. By this date, we also expect to have additional regulatory tools by which to assess the reasonableness of access charges. We may, for example, be able to establish benchmarks based on prices for the interstate access

[349] The observation that competitive entry will occur in some places, and for some services, more rapidly than others is a corollary to the rule that firms in competitive markets seek to maximize their profits. *See, e.g.,* Carlton & Perloff, *supra*, at 89. To maximize profits, firms naturally seek out those customers and services on which they can generate the most profits. Therefore, some customers are naturally more desirable than others at any given point in time. As competitors attempt to gain the patronage of the customers offering the greatest profit opportunities, they offer lower-priced or more desirable services. These actions have the effect of reducing over time the profitability of serving those particular customers and, as this occurs, the relative profitability of serving other customers or offering other services increases. Therefore, competitors begin seeking to serve these other customers, and entry occurs in new places, or for new services.

services for which competition has emerged, and use the prices actually charged in competitive markets to set rates for non-competitive services and markets. Carriers could be required either to set their rates in accordance with the benchmarks or to justify their rates using their cost studies.

269. We anticipate that the pro-competitive regime created by the 1996 Act, and implemented in the *Local Competition Order* and numerous state commission decisions, will generate competition over the next few years. Further, it would be imprudent to prejudge the effectiveness of those measures at creating competitive local markets. Rather than ignore or interfere with the effects of this developing competition on prices for interstate access services, we find that the public interest is best served by permitting emerging competition to affect access charge rate levels. In addition, the experience we gain from observing the effects of emerging competition on interstate access services will permit us more effectively and efficiently to implement any prescriptive measures that may be needed in the future to ensure that interstate access services remaining subject to regulation are priced in accordance with the forward-looking economic cost of providing those services.

270. Economic logic holds that giving incumbent LECs increased pricing flexibility will permit them to respond to competitive entry, which will allow prices to move in a way that they would not have moved were the pricing restrictions maintained.[350] This can lead to better operating markets and produce more efficient outcomes. Deregulation before competition has established itself, however, can expose consumers to the unfettered exercise of monopoly power and, in some cases, even stifle the development of competition, leaving a monopolistic environment that adversely affects the interests of consumers.[351] Therefore, it is important that we design our market-based approach carefully. We must, among other things, decide which, if any, of the rules setting forth specific competitive triggers and corresponding flexibility as proposed in the NPRM we should adopt. We will resolve these issues in the subsequent report and order in this docket.

271. As set forth in the summary of comments appended to this order, AT&T cites to *Farmers Union Central Exchange, Inc. v. FERC*[352] for the proposition that "[r]eliance on competitive forces to constrain exchange access rates, particularly in the presence of strong indications that market forces will not produce the intended results, would be arbitrary and capricious and contravene the Commission's statutory duty to ensure just, reasonable, and

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[350] *E.g.*, Jean-Jaques Laffont & Jean Tirole, *Creating Competition Through Interconnection: Theory and Practice*, 10 J. Reg. Econ. 227-56 (1996).

[351] *See, e.g.*, Jean Tirole, *The Theory of Industrial Organization* 230 (1988).

[352] 734 F.2d 1486, 1508 (D.C. Cir.) (*Farmers Union*), *cert. denied, Williams Pipe Line Co. v. Farmers Union Central Exchange, Inc.*, 469 U.S. 1034 (1984).

nondiscriminatory rates."[353] We disagree with AT&T's assertion. In *Farmers Union*, FERC had stated in its relevant order that ratemaking for oil pipelines should be used solely to prevent price gouging, and had interpreted the Congressional mandate of "just and reasonable" rates as requiring that rates be kept within the zone of commercial reasonableness, not public utility reasonableness.[354] Under this interpretation, FERC had concluded that it would rely primarily on market forces to keep rates reasonable.[355]

272. The court in *Farmers Union* recognized that "[m]oving from heavy to lighthanded regulation . . . can be justified by a showing that . . . the goals and purposes of the statute will be accomplished through substantially less regulatory oversight," but objected to FERC's failure to establish that its new approach would satisfy the "just and reasonable" standard.[356] The court rejected FERC's position that oil pipeline ratemaking should protect only against "egregious exploitation and gross abuse" as being inconsistent with the mandate that Congress had established for FERC.[357] The court concluded that FERC had not shown that market forces were sufficient to rely upon in setting reasonable rates.[358]

273. We reject AT&T's argument that our market-based approach to access charge reform is analogous to FERC's conduct at issue in *Farmer's Union*. Our access charge and price cap rules are designed to ensure that access charges remain within the "zone of reasonableness"[359] defining rates that are "just and reasonable,"[360] and our market-based approach will also be designed to implement this statutory requirement. It will not remove incumbent LECs from regulation immediately, but will implement deregulation in steps, as competitive conditions warrant. Throughout the transition to deregulation in the face of substantial competition, we will maintain many safeguards against unjust or unreasonable rates, such as the price cap indices. We will deregulate incumbent LEC services only when it

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[353] Appendix B, Sec. IV.A., *infra*.

[354] *Farmers' Union*, 734 F.2d at 1492.

[355] *Id.*

[356] *Id.* at 1510.

[357] *Id.* at 1502.

[358] *Id.* at 1508.

[359] *Id.* at 1502.

[360] 47 U.S.C. § 201(b).

is reasonable to conclude that competition has developed to such an extent that the market will ensure just and reasonable rates.[361]

274. Second, our market-based approach is an eminently reasonable method for pursuing our goal of promoting competition and ensuring the economically efficient pricing of interstate access services. As competition emerges, the market-based approach will permit access charges to move towards the levels that will prevail in competitive markets. During the transition to competitive markets, access services not subject to competition will remain subject to price cap regulation, and we will eventually prescribe rates for those services at forward-looking economic cost levels, to ensure that all consumers reap the benefits of economically-efficient prices. Unlike the FERC regulation at issue in *Farmers Union*, our market-based approach to promoting the development of competitive markets and economically-efficient pricing will not be based on "largely undocumented reliance on market forces . . . ."[362] Instead, we will design our approach so that deregulation occurs only when the reliability of market forces can be fully determined with respect to a particular service. Finally, we observe that FERC's mandate in *Farmers Union* was one of rate regulation due to market failure and concern over monopoly power.[363] In light of the 1996 Act, our mandate is no longer strictly or solely one of rate regulation. Congress has stated its desire to establish "a pro-competitive, deregulatory national policy framework."[364] Our market-based approach will be designed to coincide with and promote this objective.

275. *Price Squeeze Concerns Are Adequately Addressed.* Several parties have argued that current access charge rate levels create the conditions for an anticompetitive price squeeze when a LEC affiliate offers interexchange services in competition with IXCs.[365] A price squeeze, as the term is used by these parties, refers to a particular, well-defined strategy of predation that would involve the incumbent LEC setting "high" prices for interstate exchange access services, over which the LEC has monopoly power (albeit constrained by regulation), while its affiliate is offering "low" prices for long-distance services in competition with the other long-distance carriers. Because interstate exchange access services are a necessary input for long-distance services, these parties argue that an incumbent LEC can create a situation where the relationship between the LEC's "high" exchange access prices and its affiliate's

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[361] Such market-based regulation of prices has been upheld where the market being relied upon is sufficiently competitive and the regulator maintains its authority to step in to ensure that rates remain just and reasonable. *Elizabethtown Gas Co. v. FERC*, 10 F.3d 866, 870-71 (D.C. Cir. 1993).

[362] AT&T Comments at 48 (*citing Farmers Union*, 734 F.2d at 1508).

[363] *Farmers' Union*, 734 F.2d at 1508.

[364] *Joint Explanatory Statement.*

[365] Appendix B, Section IV.A, *infra.*

"low" prices for long-distance services forces competing long-distance carriers either to lose money or to lose customers even if they are more efficient than the LEC's affiliate at providing long-distance services. It is this nonremunerative relationship between the input prices and the affiliate's prices, and not the absolute levels of those prices, that defines a price squeeze. In the most extreme case, a price squeeze involves a monopolist setting input prices that are actually higher than its prices in the output market.

276. Price cap regulation of access prices limits the ability of LECs to raise the prices of the input services. Commenters raising price squeeze concerns argue, however, that a LEC's interexchange affiliate will still be in a position to implement a price squeeze by setting long-distance rates close to the rates for access services, thereby forcing IXCs to charge below-cost rates to retain customers. They argue that LECs' interexchange affiliates have lower costs of providing interexchange services because of their affiliation with monopoly providers of interstate access services, and not as a result of being more efficient. According to these commenters, the relevant economic costs of providing interstate interexchange services will be lower for the LEC affiliate offering interexchange services than for competing IXCs because it only has to recover the true economic cost of providing the interstate access services (since the owners of the LEC and its interexchange affiliate will want the two entities to maximize their joint profits), whereas the IXCs will be forced to pay interstate access charges that are above the true economic cost of providing the underlying services.

277. Absent appropriate regulation, an incumbent LEC and its interexchange affiliate could potentially implement a price squeeze once the incumbent LEC began offering in-region, interexchange toll services. Although no BOC affiliate may offer such services at this time, GTE, SNET, Sprint and other incumbent LECs do have affiliates offering such services. The incumbent LEC could do this by raising the price of interstate access services to all interexchange carriers, which would cause competing in-region carriers to either raise their retail rates to maintain their profit margins or to attempt to maintain their market share by not raising their prices to reflect the increase in access charges, thereby reducing their profit margins. If the competing in-region, interexchange providers raised their prices to recover the increased access charges, the incumbent LEC's interexchange affiliate could seek to expand its market share by not matching the price increase. The incumbent LEC affiliate could also set its in-region, interexchange prices at or below its access prices. Its competitors would then be faced with the choice of lowering their retail rates for interexchange services, thereby reducing their profit margins, or maintaining their retail rates at the higher price and risk losing market share.

278. We conclude that, although an incumbent LEC's control of exchange and exchange access facilities may give it the incentive and ability to engage in a price squeeze, we have in place adequate safeguards against such conduct. The *Fifth Competitive Carrier*

Report and Order[366] requirements aid in the prevention and detection of such anticompetitive conduct. In our recent *In-Region Interexchange Order* we decided to retain the *Fifth Competitive Carrier Report and Order* separation requirements for incumbent LEC provision of in-region interLATA services.[367] These requirements apply both to BOCs and to other incumbent LECs. In addition, as discussed in that order, BOC interexchange affiliates are subject to the safeguards set forth in section 272 of the Act.[368]

279. The *Fifth Competitive Carrier Report and Order* separation requirements have been in place for over ten years, and independent (non-BOC) incumbent LECs have been providing in-region, interexchange services on a separated basis with no substantiated complaints of a price squeeze. Under these separation requirements, incumbent LECs are required to maintain separate books of account, permitting us to trace and document improper allocation of costs and/or assets between a LEC and its long-distance affiliate, as well as to detect discriminatory conduct. In addition, we prohibit joint ownership of facilities, which further reduces the risk of improper allocations of the costs of common facilities between the incumbent LEC and its interexchange affiliate, as discussed at length in the *In-Region Interexchange Order*[369] and the *Non-Accounting Safeguards Order* (addressing the Act's prohibition of BOC joint ownership with its interexchange affiliate pursuant to Section 272).[370] As we also discussed at length in those orders, the prohibition on jointly-owned facilities also helps to deter any discrimination in access to the LEC's transmission and switching facilities by requiring the affiliates to follow the same procedures as competing interexchange carriers to obtain access to those facilities. Finally, our requirement that incumbent LECs offer services at tariffed rates, or on the same basis as requesting carriers

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[366] *Policy and Rules Concerning Rates for Competitive Common Carrier Services and Facilities Authorizations Therefor*, CC Docket No. 79-252, Fifth Report & Order, 98 FCC 2d 1191, 1198 ¶ 9 (1984) (*Fifth Competitive Carrier Report and Order*).

[367] *Regulatory Treatment of LEC Provision of Interexchange Services Originating in the LEC's Local Exchange Area and Policy and Rules Concerning the Interstate, Interexchange Marketplace*, Second Report and Order in CC Docket No. 96-149 and Third Report and Order in CC Docket No. 96-61, __ FCC Rcd ____, FCC 97-142 (Apr. 18, 1997) (*Dom/Nondom R&O*)

[368] *Id.*

[369] *Id.* ¶¶ 163-69.

[370] *Implementation of the Non-Accounting Safeguards of Sections 271 and 272 of the Communications Act of 1934, as amended*, First Report and Order and Further Notice of Proposed Rulemaking, FCC 96-489 ¶¶ 159-62 (Dec. 24, 1996) (*Non-Accounting Safeguards Order*), *on recon.*, FCC 97-52 (Feb. 19, 1997), *recon. pending*, CC Docket No. 96-149, *petition for summary review in part denied and motion for voluntary remand granted sub nom., Bell Atlantic v. FCC*, No. 97-1067 (D.C. Cir. filed Mar. 31, 1997), *petition for review pending sub nom., SBC Communications v. FCC*, No. 97-1118 (D.C. Cir. filed Mar. 6, 1997) (held in abeyance pursuant to court order filed May 7, 1997).

that have negotiated interconnection agreements pursuant to section 251[371] reduces the risk of a price squeeze to the extent that an affiliate's long-distance prices would have to exceed their costs for tariffed services.

280. Current conditions in markets for interexchange services give us comfort that an anticompetitive price squeeze is unlikely to occur as a result of our decision not to prescribe immediately access charge rates at forward-looking economic cost levels. If an incumbent LEC does attempt to engage in an anticompetitive price squeeze against rival long-distance providers, the provisions of the Act should permit new entrants or other competitors to seek out or provide competitive alternatives to tariffed incumbent LEC access services. For example, under the provisions of section 251,[372] a competitor will be able to purchase unbundled network elements to compete with the incumbent LEC's offering of local exchange access. Therefore, so long as an incumbent LEC is required to provide unbundled network elements quickly, at economic cost, and in adequate quantities, an attempted price squeeze seems likely to induce substantial additional entry in local markets. Accordingly, there should be a reduced likelihood that an incumbent LEC could successfully employ such a strategy to obtain the power to raise long-distance prices to the detriment of consumers.

281. Furthermore, even if a LEC were able to allocate improperly the costs of its affiliate's interexchange services, we conclude that it is unlikely that the LEC's interexchange affiliate could engage successfully in predation.[373] At least four interexchange carriers -- AT&T, MCI, Sprint, and LDDS WorldCom -- have nationwide, or near-nationwide, network facilities that cover every LEC's region.[374] These are large, well-established companies with millions of customers throughout the nation. It is unlikely, therefore, that one or more of these national companies can be driven from the market with a price squeeze, even if effectuated by several LECs simultaneously, whether acting together or independently. Even if it could be done, it is doubtful that the LECs' interexchange affiliates would later be able to raise, and profitably sustain, prices above competitive levels. As Professor Spulber has observed, "[e]ven in the unlikely event that [LECs' interexchange affiliates] could drive one of the three large interexchange carriers into bankruptcy, the fiber-optic transmission capacity

[371] *Id.* ¶ 164.

[372] 47 U.S.C. § 251(c)(3).

[373] *See Matsushita Elec. Indus. Co. v. Zenith Radio Corp.*, 475 U.S. 574, 589 (1986) ("[P]redatory pricing schemes are rarely tried, and even more rarely successful.").

[374] *Motion of AT&T Corp. to be Reclassified as a Non-Dominant Carrier*, 11 FCC Rcd 3271, 3304 ¶¶ 60-61 (1996).

of that carrier would remain intact, ready for another firm to buy the capacity at distress sale and immediately undercut the [affiliates'] noncompetitive prices."[375]

282. Finally, in addition to our regulations and the provisions of section 251 of the Act, the antitrust laws also offer a measure of protection against a possible price squeeze.[376] Although we believe it would not serve the public interest for us knowingly to permit a price squeeze to occur, and to rely entirely on the adequacy of antitrust law remedies to protect the public, we take comfort in the fact that such remedies exist should an anticompetitive price squeeze occur in spite of the safeguards we have adopted.[377] In particular, although a price squeeze engaged in by several LECs, particularly if it involved more than one of the BOCs or GTE, could have a significant impact on interexchange competitors, we believe that the antitrust laws will act as a strong backstop to our own enforcement process so that the risk of such concerted activity is sufficiently limited.[378]

283. *Other Concerns Raised by Commenters.* Several commenters raised concerns that our market-based approach to access charge reform might permit incumbent LECs to engage in cross subsidization, either between competitive and non-competitive services, or

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[375] Daniel F. Spulber, *Deregulating Telecommunications*, 12 Yale J. Reg. 25, 60 (1995).

[376] Beginning with Judge Learned Hand's opinion in *United States v. Aluminum Co. of America (Alcoa)*, 148 F.2d 416, 437-38 (2d Cir. 1945), a specific body of precedent has developed under federal antitrust law defining situations where a price squeeze can be actionable as a form of monopolization or attempted monopolization under Section 2 of the Sherman Act. 15 U.S.C. § 2. Under this precedent, a price squeeze can violate the antitrust laws where (1) a firm has monopoly power with respect to an "upstream" product; (2) it sells that product at "higher than a 'fair price,'"; (3) the product is a necessary input for the product being sold by other firms in competition with the monopoly or its affiliate in a "downstream" market; and (4) the monopolist offers the "downstream" product at a price so low that (equally-efficient) competitors cannot match the price and still earn a "living profit." *Alcoa*, 148 F.2d at 437-38. Over time, courts have developed several tests for determining when the relationship between the two prices is sufficiently adverse to competitors that it constitutes an anticompetitive price squeeze. *See, e.g., Bonjorno v. Kaiser Aluminum & Chem. Corp.*, 752 F.2d 802, 808-09 (3d Cir. 1984), *cert.denied*, 477 U.S. 908 (1986); *Ray v. Indiana & Mich. Elec. Co.*, 606 F. Supp. 757, 776 (N.D. Ind. 1984), *aff'd*, 758 F.2d 1148 (7th Cir. 1985).

[377] Because the rates charged by LEC interexchange affiliates will not be regulated, we do not believe that a court would reject a price squeeze claim under the antitrust laws on the grounds that "'normally' a price squeeze will not constitute an exclusionary practice in the context of a fully regulated monopoly." *Town of Concord v. Boston Edison Co.*, 915 F.2d 17 (1st Cir.1990) (J. Breyer), *cert. denied*, ___ U.S. ___, 111 S. Ct. 1337 (1991). Indeed, the court in that case explicitly declined to address the "special problem" posed by a price squeeze allegation against a firm regulated in the input market and undercutting rivals' prices in the unregulated market where inputs are used. *Id.* at 29.

[378] *See Non-Accounting Safeguards Order* FCC 97-142 ¶ 70.